

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF KENTUCKY
BOWLING GREEN DIVISION
CASE NO. 1:10-CV-00154-R**

**KARST ENVIRONMENTAL EDUCATION
AND PROTECTION, INC.**

PLAINTIFF

v.

FEDERAL HIGHWAY ADMINISTRATION, et al.

DEFENDANTS

MEMORANDUM OPINION AND ORDER

This matter is before the Court on the parties' cross motions for summary judgment (DN 35, DN 40). Each party has replied to the others' motion (DN 43; DN 48). The Sierra Club, the City of Bowling Green, Warren County, and the Intermodal Transportation Authority have filed amicus briefs for the Court's consideration (DN 41; DN 46). This matter is now ripe for adjudication. For the reasons that follow, the Court grants Defendants' motion for cross summary judgment on all counts. The Court denies Plaintiff's motion for summary judgment on all counts. Judgment shall be entered on behalf of Defendants.

I. BACKGROUND

A. General Background

This action has its origins in the commercial and industrial growth that has characterized Bowling Green, Kentucky ("City"), for the past several decades. The City and the county in which it sits, Warren County ("County"), serve as the main economic hub for southwestern Kentucky and both are increasing rapidly in population. Final Environmental Impact Statement, DN 17-2 at 11 ("FEIS"). Between 2000 and 2006, the County increased in population by 6.5%, up to 98,960. *Id.*

To the northeast of the City are located U.S. interstate I-65 ("I-65") and U.S. Highway

31-West (“U.S. 31”). The two highways project out from the City like the spokes of a wheel. I-65 heads due east while U.S. 31 takes a more northeasterly route, forming a corridor with their divergence (“Corridor”). The road network within the Corridor includes KY 446 and U.S. 68/K.Y. 80. Also, running roughly parallel to I-65 and traversing the Corridor between the roads is a CSX railroad freight line. Developments in the Corridor include a number of industrial and manufacturing plants located in two industrial parks, several public schools, an assortment of commercial businesses, apartment complexes, two large mobile home parks, and single family residences.

One of the industrial parks in the Corridor is the Kentucky Transpark (“Transpark”), an industrial economic zone created by the Inter-Modal Transportation Authority, Inc. (“ITA”). The ITA is a nonprofit agency formed by the City and County to purchase land for and to develop the Transpark. Planning for the Transpark began in 2000 when the City and County decided to create an area for high tech business and industry for the region. A site in the Corridor was selected due to its proximity to major highways and rail lines, and the ITA subsequently purchased 834 acres, financed through a bond issuance (“Phase I”). The land for Phase I has been rezoned from agricultural to industrial use, and currently, there are four industrial and commercial developments within this area of the Transpark that employ approximately 800 people. The ITA plans on purchasing another 340 acres to the Transpark’s east if the market conditions and infrastructure warrant the addition (“Phase II”).

B. The Project

Together with the Kentucky Transportation Cabinet (“KYTC”), the Federal Highway Administration (“FHWA”) began planning a connector road in 2003 that would extend from north to south, linking the two spokes of the Corridor, I-65 and U.S. 31 (“Project”). According

to the FEIS, the Project was necessary to improve access between the two thoroughfares, improve the traffic capacity in the area, and curb the increasing accident rate for sections of the road network in the Corridor. FEIS, DN 17-2 at 14-15. The FHWA published notices of the Project in the Federal Registrar and stated its intent to analyze the Project under the National Environmental Policy Act of 1969 (“NEPA”). Meetings were held between federal, state, and local officials to discuss the Project’s breadth, its impact on the environment, and the indirect effects the additional cars and trucks would have on the area.

By early 2004, the FHWA had designed a number of construction alternatives for the Project. They were as follows:

- Alternative 1 (“Alt. 1”): The no build alternative, the FHWA would take no action to alter the existing roads in the Corridor or construct new roads linking U.S. 31 and I-65. *Id.* at 48-49.
- Alternative 2 (“Alt. 2”): The FHWA would employ “transportation system management strategies” coupled with low-cost capital investments to the current infrastructure within the Corridor to streamline traffic. This alternative called for minor construction projects like intersection improvement, bottleneck removal, and lane management, along with signal coordination. *Id.* at 49.
- Alternative 3 (“Alt. 3”): This strategy called for the total reconstruction of the interchange between I-65 and KY 446 at the south end of the Project, the widening of KY 446 from four to eight lanes for one mile, a partial reconstruction of the interchange between KY 446 and U.S. 31 at the north end of the Project, and a widening of U.S. 31 from four to six lanes for roughly four miles. *Id.* at 50-53.
- Alternative 3 Minimization Design (“Alt. 3 Min”): This plan mimicked Alt. 3 to a large extent, however altered the widening plans for U.S. 31 so as to reduce the number of residential and commercial property displacements. *Id.* at 53.
- Alternative 4 (“Alt. 4”): The FHWA called for the reconstruction of U.S. 68/KY 80 from two lanes to four lanes for 4.4 miles. It would also convert the half interchange at I-65 and KY 80 to a full diamond interchange. *Id.* at 55-56.
- Alternative 3+4 North, South (“Alt. 3+4”): Relying on certain aspect of Alt. 3 and Alt. 4, this alternative called for the crossing of the CSX railroad line in

different locations to avoid hitting either the historic Cole House (South Alternative) or Oakland's historic district (North Alternative). *Id.* at 56.

- Alternative 5 (“Alt. 5”): Alt. 5 advocated for a completely new route through the Corridor. The FHWA outlined a four-lane divided connector to extend 2.6 miles from I-65 to U.S. 31, with bridges over the CSX railroad and U.S. 68/KY 80. Alt. 5 had three variations, Red, Blue, and Orange, each of which called for minor design adjustments. *Id.* at 57-59.
- Alternative 6 (“Alt 6”): Alt. 6 was similar to Alt. 5, except it provided for a grade-separated interchange when the connector met U.S. 68/KY 80. As a result, this road would need to be reconstructed as it met the interchange and continued under the connector. Like Alt. 5, there were three variations of Alt. 6: Red, Blue, and Orange. *Id.* at 60-61

On April 21, 2004, a meeting was held with federal, state, and local agencies. There, the FHWA eliminated Alternatives 2, 3, and 4 from further consideration because they did not meet the purpose and need of the Project. Only Alternatives 1, 3+4, 5 and 6 were advanced for future screening.

After a series of public forums, meetings with representatives from Mammoth Cave National Park, and continued dialogue with state and local officials, the FHWA published its Draft Environmental Impact Statement in May of 2007 (“DEIS”). Within, the FHWA reviewed the remaining construction designs and selected Alt. 6-Orange as the preferred alternative.

Briefly summarizing its rationale, the FHWA chose Alt. 6-Orange because:

it would serve traffic needs better than the other alternatives, its Orange alignment is the new corridor option farthest from the Mill Cave entrance, and its Orange alignment is the only Alternative 5 or 6 option that received a “not likely to adversely affect” determination from [United States Forest and Wildlife Service] for possible impacts to the protected, endangered gray bat.

Rule of Decision (“ROD”), DN 17-6 at 14; *see* FEIS, DN 17-2 at 66. The publication of the DEIS was followed by a period of public comment, pursued either through the Federal Register or during a series of public hearings. Two years later, the FHWA finalized the environmental

impact statement and published the FEIS, outlining the plan, scope, and cost of the Project. The FHWA issued the ROD on April 15, 2010, which represented the agency's final decision.

C. Geography and Biodiversity of the Region

Much of the City and County sit atop the Western Pennyroyal sinkhole plain. The area is recognized as one the best examples of karst topography in the United States.¹ The region is pockmarked with ponds, karst valleys, caves, and sinkholes of varying depths and has an elaborate network of underground streams and water basins. The cornerstone of the region's karst topography is Mammoth Cave, the largest underground cave system in the world. Although Mammoth Cave National Park is located approximately ten miles from the Project area, the cave system itself spider-webs in all directions for four hundred miles and boasts a complex and unique subterranean ecosystem. Mammoth Cave and much of the surrounding area have been designated a World Heritage site by the United Nations Education, Scientific and Cultural Organization.

This geological diversity begets natural diversity both above and below ground. A number of threatened and endangered species call the region home, including but not limited to, the Indiana bat, the gray bat, the Kentucky cave shrimp, two species of freshwater mussels, troglobites, southern cave fish, cave crayfish, and cave beetles. These species are inextricably linked to the underground network of streams and water basins and are susceptible to pollutants carried by rain runoff.

More locally to the Project area, there are several karst geologic formations and

¹ Karst topography is "usually characterized by barren, rocky ground, caves, sinkholes, underground rivers, and . . . results from the excavating effects of underground water on massive soluble limestone." Encyclopedia Britannica Online, www.britannica.com (last visited February 14, 2011) (defining "karst").

underground water basins. Within the Project area are Long Hollow Cave, Wolf Sink Cave, Mill Cave, and Grant Palmore Cave. These caves and the surrounding sinkholes are interconnected by streams and passages running beneath the surface. In addition, the Project area is located directly above the Graham Springs Basin (“GSB”), a karst groundwater basin that stretches below the surface for 122 square miles. GSB is one of the largest basins of its kind in Kentucky and represents the future drinking water supply of the City. GSB abuts the Turnhole Spring Basin (“TSB”) to the northeast. The water collected in GSB flows in subterranean passages to the west toward the City, eventually draining into the Barren River. The water in TSB flows northward, through Mammoth Cave, and joins up with the Green River. Although the parties debate the circumstances under which such an event would take place, neither disputes that water could flow between GSB and TSB under certain conditions.

D. Procedural Background

Karst Environmental Education and Protection, Inc. (“KEEP”) is a nonprofit Kentucky Corporation that describes its mission “to educate and advocate towards the goal of protecting, conserving, and defending karst, karst systems, and karst landscapes.” Pl. Am. Compl. ¶ 12, DN 11 at 6. KEEP alleges that many of its members “use, enjoy, appreciate, study and rely on” the karst landscape that the Project will impact if constructed. Pl. Am. Compl. ¶ 15, DN 11 at 8. KEEP participated in the environmental review process for the Project and consulted with other parties who raised concerns about its impact.

On October 5, 2010, KEEP brought this action against the FHWA, Victor M. Mendez in his official capacity (the administrator of the FHWA), and Jose Sepulveda in his official capacity (division administrator for FHWA, Kentucky Division) (collectively “Defendants”). Through the Administrative Procedure Act (“APA”), KEEP claims that the FHWA committed numerous

violations of NEPA prior to issuing the FEIS and the ROD. For relief, KEEP asks that the Court declare unlawful and vacate the FEIS and the ROD, enjoin the disbursement of federal funds for the Project, enjoin the FHWA from relying on the information gathered from meetings with the City, County, and ITA, and award it costs under 28 U.S.C. 2412(a), (d). Pl. Am. Compl., p. 42-44, DN 11 at 42-43.

II. STANDARDS OF REVIEW

A. Administrative Procedure Act

Federal courts have jurisdiction over challenges under NEPA pursuant to the APA. *See Env'tl. Def. Fund v. Tenn. Valley*, 468 F.2d 1164, 1171 (6th Cir. 1972). A reviewing court may overturn agency action when it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(a); *see Northeast Ohio Reg'l Sewer Dist. v. U.S. E.P.A.*, 411 F.3d 726, 731 (6th Cir. 2005). In deciding whether an agency’s rule is arbitrary and capricious, the Court considers if the decision was “based on a consideration of the relevant factors and whether there has been a clear error of judgment.” *Marsh v. Or. Nat'l Res. Council*, 490 U.S. 360, 377-78 (1989) (quoting *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971)). Although the court’s inquiry should be searching and careful, “the ultimate standard of review is a narrow one.” *Id.*

A Court cannot substitute its own judgment for that of the agency, and need only determine if it adequately reviewed the issue. *Neighbors Organized to Insure a Sound Env't, Inc., v. McArtor*, 878 F.2d 174, 178 (6th Cir. 1989). Particular leeway is given to an agency with regard to scientific matters in its area of technical expertise. *Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 560 (D.C. Cir. 2002). When experts disagree on technical conclusions the court must defer to the agency’s qualified experts, “even if, as an original matter, a court might find

contrary views more persuasive.” *Marsh*, 490 U.S. at 378. The party who brings the case bears the burden of demonstrating that the actions of the agency were arbitrary and capricious. *Sierra Club v. Marita*, 46 F.3d 606, 619 (7th Cir. 1995); *Citizens for Smart Growth v. Peters*, 716 F. Supp. 2d 1215, 1221 (S.D. Fla. 2010).

B. NEPA

Congress enacted NEPA “to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” *Nev. Land Action Ass’n v. U.S. Forest Serv.*, 8 F.3d 713, 716 (9th Cir. 1993) (quoting 42 U.S.C. § 4321 (1988)). In furtherance of these goals, before engaging in major federal action that will “significantly affect the quality of the human environment,” federal agencies must publish a detailed statement on:

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

42 U.S.C. § 4332(2)(C)(i)-(v). Put another way, the statute requires two things: “that an agency ‘consider every significant aspect of the environmental impact of a proposed action,’ and that it ‘inform the public that it has indeed considered environmental concerns in its decisionmaking process.’” *Greater Yellowstone Coal. v. Lewis*, 628 F.3d 1143, 1150 (9th Cir. 2010) (quoting *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983)).

NEPA’s requirements are procedural rather than substantive, thereby “ensur[ing] that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts.” *Winter v. Natural Res. Def.*

Council, Inc., 555 U.S. 7, 23 (2008) (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). On review, to satisfy the standards of NEPA, the federal agency need only have taken a “hard look” at the environmental impact of its decision. *Citizens Against Pellissippi Parkway Extension, Inc. v. Mineta*, 375 F.3d 412, 418 (6th Cir. 2004).

C. Summary Judgment

“The rubric of summary judgment review has a special twist in the administrative law context.” *Conservation Law Found. v. Fed. Highway Admin.*, 630 F. Supp. 2d 183, 200-01 (D.N.H. 2007) (quoting *Associated Fisheries of Me., Inc. v. Daley*, 127 F.3d 104, 109 (1st Cir. 1997)). The court’s “review is limited to the administrative record” and “[t]he evidence . . . must be construed in a light most favorable to the party opposing the motion.” *River Fields, Inc. v. Peters*, No. 3:08-CV-264-S, 2009 WL 2222901, at *4 (W.D. Ky. July 23, 2009) (citations omitted). Since agency action may only be set aside where it is arbitrary, capricious, or otherwise contrary to the law, the court “must look to see if the agency decision, in the context of the record, is too unreasonable (given its statutory and factual context) for the law to permit it to stand.” *Conservation Law Found.*, 630 F. Supp. 2d at 200-01 (quoting *Sierra Club v. Marsh*, 976 F.2d 763, 769 (1st Cir. 1992)).

III. DISCUSSION

A. KEEP’s Standing

In their amicus brief, the City, the County, and ITA challenge KEEP’s standing to bring this action, citing the recent Sixth Circuit decision of *Heartwood, Inc. v. Agpaoa*, 628 F.3d 261 (6th Cir. 2010). Although the issue is briefly addressed by KEEP in its response, this Court has “an independent obligation to investigate and police the boundaries of [its] own jurisdiction.” *Douglas v. E.G. Baldwin & Assocs., Inc.*, 150 F.3d 604, 607 (6th Cir. 1998), abrogated on other

grounds by *Arbaugh v. Y & H Corp.*, 546 U.S. 500, 515-16 (2006). Thus, notwithstanding the omission of this objection by Defendants, the Court will review the issue.

An organization or association of individuals who bring suit against a federal agency must show eight total requirements for Article III standing.² The first hurdle mandates at least one of the members of the association show a concrete and particularized injury that is actual or imminent, and not conjectural or hypothetical. *Friends of the Earth, Inc. v. Laidlaw Env'tl. Servs., Inc.*, 528 U.S. 167, 180-81 (2000). “[An] injury to aesthetic, recreational, or scientific interests may constitute ‘concrete injury,’” but only where the federal agency is “undertaking or threatening to undertake activities that cause or threaten harm to the plaintiffs’ protected interests.” *Heartwood*, 628 F.3d at 267 (quoting *Ctr. For Biological Diversity v. Lueckel*, 417 F.3d 532, 537 (6th Cir. 2005)). The Sixth Circuit said in *Lueckel* that for an adequate injury, affiants from an association had to describe “specific activities and events that have or will diminish [their] enjoyment” within a particular section of the affected area. *Lueckel*, 417 F.3d at 538 (describing particular river corridors affected by logging); see *Ky. Riverkeeper, Inc. v. Midkiff*, No. 05-CV-181, 2011 WL 2789086, at *12-13 (E.D. Ky. July 14, 2011) (members of association had standing to bring suit where they identified specific portions of lakes and streams where mining activities were to occur).

² Specifically, such a plaintiff must show the following: (1) an injury in fact that is both “concrete and particularized” and “actual or imminent”, (2) “the injury is fairly traceable to the challenged action of the defendant”, (3) the injury will likely be redressed with a favorable decision, (4) the plaintiff’s complaint relates to a federal agency’s action or inaction, (5) it “suffered either legal wrong or an injury falling within the zone of interest sought to be protected by the statute on which its complaint is based”, (6) the members of the association would enjoy standing in their own right, (7) “the interests it seeks to protect are germane to the organization’s purpose”, and (8) both the association’s claim and the relief it seeks do not require the “participation of individual members in the law suit.” *Heartwood*, 628 F.3d at 266 (internal citations and quotation marks omitted).

The amicus brief targets the first requirement for standing, arguing that KEEP's members have not alleged a concrete and particularized injury should construction of the Project proceed. The Court respectfully disagrees. Affiant Don Simon states he lives approximately 1000 feet from the Project area, travels the affected roads by automobile on a daily basis, and appreciates the geology of north Warren County. Simon Aff. ¶¶ 1-6, DN 20-1 at 1-3. Affiant Guy Briggs declares he is a nature photographer, has photographed the area affected by the Project in north Warren County, and his aesthetic and environmental interests will be harmed if there are changes to the Project area. Briggs Aff. ¶¶ 1-7, DN 20-2 at 1-3. Affiant Gayla Cissell says she has "used, enjoyed, studied, and relied upon the karst landscape and associated cultural landscape within the path of the connector road." Cissell Aff. ¶¶ 1-6, DN 20-3 at 1-2. Affiants Hilary Lambert and John Blubaugh both claim to frequently explore specific subterranean passageways in the vicinity of the Project, including Mill Cave River and Wolf Sink Cave. Lambert Aff. ¶ 3, DN 20-4; Blubaugh Aff. ¶ 5, DN 20-5. Collectively, these individuals worry the Project's construction will adversely impact this underground ecosystem, their hobbies, and the overall Karst landscape. KEEP and its members provide markedly more than the "general averments" and "conclusory allegations", of which the Supreme Court warned in *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 888 (1990). Accordingly, KEEP has described a sufficient injury for Article III standing.

KEEP has satisfied the other seven requirements as well. The injuries alleged are traceable to the Project, delaying or stopping the Project would redress the injuries, KEEP's complaint confronts action by the FHWA, its members enjoy standing in their own right, KEEP's goals are germane to the interests of its members, and the participation of KEEP's members is unnecessary. *Cf. Heartwood*, 628 F.3d at 226. The Court has jurisdiction over this

matter and will rule on its merits.

B. Objectively and Completely Evaluating and Disclosing Project Alternatives

At the heart of an environmental impact statement is the agency's analysis of alternatives to the federal action. *See* 40 C.F.R. § 1502.14. To satisfy NEPA, the agency must "[r]igorously explore and objectively evaluate all reasonable alternatives." *Id.* § 1502.14(1). That is not to say an agency must ceaselessly review alternatives "to include every alternative device and thought conceivable by the mind of man." *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 551 (1978). Instead, the alternatives an agency considers should be "bounded by some notion of feasibility." *Id.*

KEEP provides five general reasons how the FHWA abandoned its role as an independent arbitrator between the Project's alternatives and the competing environmental impacts. There appears, however, to be an underlying current in this section of KEEP's motion, summarized as follows: the FHWA, KYTC, and ITA have worked in unison to see a large connector road built in the Corridor to facilitate growth in the Transpark, irrespective of the Corridor's real infrastructure needs or the environmental consequences. Still, to avoid confusion amongst KEEP's various objections, each is addressed in turn below.

1. Economic forecast for the Transpark

KEEP questions the FHWA's reliance on the Transpark's employment and economic forecasts. The FHWA and KYTC used 2030 as the planning horizon for the Project and created traffic studies to estimate the future growth in population and increase in traffic throughout the Corridor. These projections helped the agencies map out which alternative would best service traffic over the coming decades. The FHWA used traffic and employment studies produced by the ITA that contained growth projections for the Transpark. These forecasts predicted an

increase in jobs and commuters to the area as a result of the industrial park's increased employment. Administrative Record ("AR") at 009133-9135.

The Benefit-Cost & Economic Impact Analysis ("BCE") produced by the ITA in March of 2000, estimated the number of jobs in the Transpark from 2010 to 2030. *Id.* at 009135. Three growth scenarios were outlined in the BCE: low, medium and large development. Under the large development in 2020 and 2030, the Transpark was projected to have 12,500 and 14,400 jobs respectively. The low development scenario estimated only 1,400 positions. The FHWA and KYTC ultimately incorporated this study's findings and chose to rely on the more aggressive growth projections when creating the traffic models for the Corridor and surrounding area. KEEP claims dependence on these the more aggressive growth figures was inappropriate because current statistics for the Transpark show employment is not keeping pace with the low employment scenario, much less the large development estimates. In light of these employment figures, KEEP outlines the following problems with the FEIS: (1) the FHWA failed to revisit the ITA's assumptions on the Transpark's employment growth or consider the most recent employment data; (2) the current traffic congestion and safety concerns for the Corridor do not necessitate the Project; and (3) the FHWA violated NEPA when it conducted a sensitivity analysis using the low development figures but did not publically disclose them in the administrative process.

i. Employment of the Transpark

As stated above, traffic volumes for the Project area were projected for the year 2030 based on the Bowling Green Regional Traffic Model. FEIS, DN 17-2 at 37-38. The prediction was founded in part on the BCE created by ITA in 2000. AR at 009115-9223. This study, along with several other factors, led the FEIS to conclude that the Project area would have 17,957 jobs

by 2030, mostly due to development in the Transpark. FEIS, DN 17-2 at 38-39.

In its evaluation, the FHWA divided the Project area into travel analysis zones (“TAZs”) for the purposes of measuring the increase in employment for the 2030 time horizon. The main TAZs examined in the Project area were TAZ 101 and TAZ 339. To reach the employment goals of 2030, TAZ 101 would have to accommodate 1,256 jobs on 449.1 acres, or 8.23 employees per acre. *Id.* This ratio of jobs-to-acre revealed a lower employment density than warehousing, light industrial, manufacturing, and industrial parks; thus, the FHWA found the employment growth for this area over the next two decades was not wildly exaggerated. AR at 006422. It also determined the employment forecast “for TAZ 101 remains the same for the No Build and Build Growth Scenarios.” *Id.*

TAZ 339 is where the parties expend most of their collective energy. This slice of the Project area makes up most of the Transpark and held no jobs in 2000. The forecasting however predicts that businesses in TAZ 339 will have 10,775 employees by 2030 under a build growth scenario and 7,303 employees under the no-build growth scenario. *Id.* at 006418-6419. Relying on its expert estimates, the FHWA said that even under the low development, this would result in an employment density of 13.52 employees per acre. According to the FHWA, such a density is still a realistic goal because it is lower than warehousing, light industrial, manufacturing, and industrial parks. *Id.* at 006422-6423. With either growth scenario, however, the FHWA determined the increase in traffic would lead to an unacceptable level of service on the road network within the Corridor. *Id.* at 006423. On this basis, the FHWA rejected KEEP’s concerns over the exaggerated employment growth of the Transpark and Project area.

KEEP objects to the FHWA’s reliance on the Transpark’s employment forecasts. The thrust of KEEP’s argument is that by using misleading economic assumptions, the FHWA

deprived the public of an open and fair airing of the Project's alternatives. More specifically, it says the current employment numbers for the Transpark are far below the original large-growth estimates and there is no evidence in the record that the FHWA revisited its conclusions in the face of the obvious shortfall. KEEP complains the FHWA did not independently evaluate the accuracy of these economic growth projections, in contravention of its duties under NEPA. *See* 40 C.F.R. § 1506.5(a) ("The agency shall independently evaluate the information submitted and shall be responsible for its accuracy."). It points to several portions of the administrative record where employees for the FHWA questioned the accuracy of the growth forecasts and alleges these concerns were not fairly addressed. AR at 003391, 012797.

The Court is unconvinced. "The power or responsibility for long range local planning [does not fall] on federal or state agencies." *N. Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1541-42 (11th Cir. 1990) (citing *Isle of Hope Historical Ass'n, Inc. v. U. S. Army Corps of Eng'rs*, 646 F.2d 215, 221 (5th Cir. Unit B May 1981)). Rather, agencies must respect the autonomy of community planners when creating a cohesive plan to incorporate the federal action. *Id.* Thus, the use of the local officials' employment forecasts is neither remarkable nor objectionable.

Next, NEPA provides agencies a certain degree of latitude when making predictions in their area of special expertise. *See Balt. Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983). KEEP admits in the present briefing that qualitatively evaluating future transportation needs is a "complex task." Pl. Mot. p. 4-5, DN 35-2 at 16-17. Thus, it would only make sense if such a calculation was provided a degree of deference when reviewed by this Court. *See Forest Serv. Employees for Env't'l. Ethics v. U.S. Forest Serv.*, 689 F. Supp. 2d 891, 899 (W.D. Ky. 2010) ("NEPA related decisions are accorded a considerable degree of deference' which creates a high

bar to success for plaintiffs challenging such actions.” (quoting *Spiller v. White*, 352 F.3d 235, 240 (5th Cir. 2003))). Indeed, courts have provided deference to experts performing traffic modeling in the past. *See e.g., Peters*, 716 F. Supp. 2d at 1225-26 (“[A] district court should ‘properly recognize that it cannot designate itself a ‘super professional transportation analyst’ or decide which party utilized the better methodology.’” (quoting *Druid Hills Civic Ass’n, Inc. v. Fed. Highway Admin.*, 772 F.2d 700, 709 (11th Cir. 1985)); *Jones v. Peters*, No. 2:06-CV-00084-BSJ, 2007 WL 2783387, at *22-23 (D. Utah Sept. 21, 2007) (where there was a disagreement over traffic predictions, the modeling had a rational footing and was therefore upheld). Accordingly, the agency’s reliance on its experts’ traffic modeling should be afforded deference.

More to the point, the FEIS and the Project incorporated the employment projections for 2030, not 2011; thus, a current shortfall does not preclude the Transpark from reaching its forecasts within the preestablished time horizon. The record confirms such a conclusion, stating the “[g]rowth forecasts and forecasted traffic needs are based on the year 2030, and are not based on the short-term marketing successes and failures [of the Transpark].” AR at 006424. The employment figures for 2011 are clearly less than those forecast. Nevertheless, simply because employment is not what the FHWA projected by this date does not necessarily mean there will be similar shortfalls in 2030. Economic estimates of this scale, largely dependent on a fluctuating economy, often do not follow a constant or even pace. For that reason, a snapshot of any one year can be misleading. The Court finds the methodology and expertise of the forecast were sound and that the current employment figures are not a sufficient reason to overturn the FEIS.

KEEP’s objections are also undermined by the well-settled law that “[f]ederal agencies

are not obligated to restart the NEPA process every time new information becomes available.”

Audubon Naturalist Soc’y of The Cent. Atl. States, Inc. v. U.S. Dept. of Transp., 524 F. Supp. 2d 642, 674 (D. Md. 2007) (citation omitted). Were agencies required to start their review anew every time the facts on the ground changed, the administrative process would never come to an end. *See Piedmont Heights Civic Club, Inc. v. Moreland*, 637 F.2d 430, 442 (5th Cir. 1981) (citing *Vt. Yankee*, 435 U.S. at 555). Thus, reliance on the ever-changing employment statistics of the Transpark would have unduly delayed the administrative process, which had already stretched seven years by the time the FEIS was published.

Even ignoring the Transpark’s employment, future congestion and safety concerns provide an adequate basis to continue the Project. The traffic modeling expressly concluded that under either growth scenario, the natural increase in traffic would result in an unacceptable strain on the Corridor’s transportation infrastructure by 2030. AR at 006423 (describing problems along U.S. 31 and KY 446). Furthermore, one of the purposes of the Project was the inadequate safety record of the Corridor’s roads. *See infra* Section III(b)(1)(ii). Hence, the Transpark’s employment data is not the legal linchpin that KEEP makes it out to be.

Insofar as KEEP argues the FHWA abdicated its responsibility to the KYTC by failing to independently judge the traffic analysis and economic forecast, the Court cannot agree. The record is replete with evidence that the FHWA and KYTC generally collaborated on the purpose and need for the Project, the various alternatives, and its impacts on the surrounding area. *E.g.*, AR at 002273, 003386, 003391, 003392-3393, 003463-3364, 004313-4356, 011763. The same can be said for the cooperation between the federal and state agencies regarding the traffic analysis and economic forecast. Members of the KYTC and the FHWA discussed the outcome and impact of the Project’s traffic model. *Id.* at 003391, 021726-21727. Conversations between

the two agencies predicted from where the traffic was expected to originate, characterized the nature of the future traffic (commuters to the industrial parks in the area), and forewarned of a dramatic increase in vehicles per day on the Corridor's roads by 2030. *Id.* Though KEEP trivializes these correspondences, it overlooks its burden in showing the FHWA's decision was arbitrary and capricious. *See Marita*, 46 F.3d at 619. The Court is not persuaded that the FHWA violated its statutory obligations.³

The Court concludes the FHWA did not shirk its duties to review the work of KYTC's consultants and satisfied its obligations under NEPA by using the employment forecasts for the Transpark.

ii. Traffic Congestion and Safety of Roads

The Project's purposes were to improve access between U.S. 31 and I-65, improve capacity on the existing network of roads, and to improve road safety in the Corridor. FEIS, DN 17-2 at 14-15. While KEEP's opening brief stated it did not intend to challenge the purpose and need for the Project, it changed tack in its reply brief, arguing the safety and congestion concerns do not necessitate the construction of Alt. 6. KEEP underlines portions of the FEIS and the administrative record for the proposition that the Corridor's road network is in fact safe.⁴ In

³ KEEP cites *Conservation Law Foundation v. Federal Highway Admin.*, 630 F. Supp. 2d 183 (D.N.H. 2007), for the proposition that the FHWA should have used a Delphi or expert panel to evaluate the economic and land use projections. The absence of a particular method from a NEPA analysis does not render the FEIS inadequate. *See Utah Shared Access Alliance v. U.S. Forest Service*, 288 F.3d 1205, 1212-13 (10th Cir. 2002). Since the agency action here and in *Conservation Law* differed dramatically (a three mile connector road versus an expansion of twenty-mile stretch of interstate between New Hampshire's major cities), the FHWA cannot be expected to use the same methods.

⁴ For this matter, the safety of roads was measured by the KYTC's Critical Rate Factor ("CRF"). Under this system, a CRF of 1.0 or greater means the section of the road is a "high crash location" whereas a lower CRF is less problematic. If a segment of the road has a CRF

examining the crash statistics, KEEP says that despite the presence of some fatal accidents, “the majority of current accidents . . . involve property damage only, including fender benders.” *See* Pl. Reply p. 9, DN 43 at 9. Questioning the FHWA’s assertions about congestion, KEEP states the Corridor’s roads are not presently overburdened.⁵ It finishes with the claim that the FHWA unreasonably withheld a rigorous review of the safety problems with the road network in the Corridor.

The FEIS’s opening pages include a safety and crash analysis, affirming that the construction of the limited access highway like Alt. 5 or Alt. 6 will result in fewer crashes measured against the historical, statewide tendencies. The FEIS also identified fifteen spots along the Corridor’s road network with a CRF of greater than 1.0 (with two spots three times the expected crash rate), and six spots approaching the 1.0 threshold. FEIS, DN 17-2 at 43-46. These findings must also be viewed through the lens of future increased use over the next two decades. *Id.* at 35-40. Thus, it is logical to predict the number of wrecks will rise in the coming years.

KEEP may be correct in its analysis that the Project area is not a “death alley”; however, neither NEPA nor the regulations governing the FHWA’s construction priorities dictate that federal actions are restricted to ameliorating safety hazards in such areas. The FHWA reviewed

between 0.9 and 1.0, it is considered a potential high crash location. AR at 003054.

There is also a distinction to be made between “sections” and “spots” of a road with regard to the CRF analysis. “Sections” are 0.3 miles in length and “spots” are less than 0.3 miles in length. *Id.*

⁵ The FHWA and KYTC use the Level of Service (“LOS”) scale as a method to evaluate and describe roadway functions. FEIS, DN 17-2 at 39. The LOS scale measures traffic congestion with alphabetical grades from “A” to “E”, with “A” representing free flowing traffic and “E” representing severe congestion. Typically, an LOS of “C” is the minimum desirable level in rural areas. *Id.*

the accident statistics for the Corridor and found an unreasonable number of fatal and non-fatal accidents. The administrative record supports this finding via facts and studies. The FEIS is not arbitrary and capricious on this basis. *See WildWest Institute v. Bull*, 547 F.3d 1162, 1171 n. 4 (9th Cir. 2008) (the agency must simply “explain the conclusions it has drawn from its chosen methodology, and the reasons it considers the underlying evidence to be reliable”).

The FEIS’s reasoning about increased traffic congestion is satisfactory. Although the current traffic volumes are within the desirable levels, by 2030 five of the eleven segments of road studied in the FEIS will have a failing grade on the LOS scale. FEIS, DN 17-2 at 37. This includes three of the four segments of U.S. 31 and all of KY 446. *Id.* Since the purpose of the Project encompasses future growth of traffic, and because the traffic studies and record illustrate the veracity of this concern, the FEIS is not flawed for citing traffic capacity as a reason for the Project.

iii. Sensitivity Analysis

KEEP mentions that the FHWA conducted alternative traffic projections for the Project area with figures that are more in line with the Transpark’s current employment numbers. These forecasts indicated Atl. 3 and Alt. 3+4 outperformed Alt. 6 in both relieving congestion and reducing travel time. KEEP objects to the administrative process because this analysis was not disclosed to the public or thoroughly vetted by the FHWA. KEEP continues, saying these internal reviews are demonstrative of the biased and misleading administrative process. Pl. Mot. p. 11, DN 35-2 at 23.

KEEP is mistaken. The documents it cites may be based on alternative growth forecasts, but they still support the construction of Alt. 6. *See* AR at 21540 (“Alternative 6 results in almost as effective congestion relief, reduces traffic through the communities of Oakland and

Smiths Grove, and is able to more effectively accommodate higher levels of growth, as demonstrated by the analysis of traffic impacts”); AR at 021713 (finding that Alt. 6 ranked either best or second best in all categories related to efficiency and cost per reduced hour of congestion). Moreover, KEEP’s claims are disconnected from the Court’s above-stated conclusions on the aggressive job growth figures. In selecting the preferred alternative, the FHWA employed reliable, expert-made reports for increased traffic in the Corridor and thoroughly examined the scope of the Project’s construction in light of those reports. Such a finding brings the Court’s review to an end.⁶

2. Impact of rail service on truck traffic

KEEP proposes the FHWA failed to analyze the impact the CSX railroad spur will have on reducing traffic in the Project area, a necessary factor in determining which alternative was most appropriate. The FHWA counters that consideration was given to the CSX rail line in an exchange of emails between FHWA staff and KYTC experts. It adds that the in-depth analysis for which KEEP advocates was unnecessary because no rail-to-truck transfer facility is planned for the Project area.

In weighting various construction options for the Project, the FHWA wrote the following about the impact of rail:

Another factor taken into account for this project is the impacts of the railroad on the demand for heavy trucks. Although railroad may reduce the demand for long-distance interstate truck travel, on the local level they are not known to reduce truck travel. Within the project area the CSX railroad is not expected to reduce truck travel demand or improve safety on the existing roads because the traffic model shows that the travel patterns are local and regional rather than interstate.

⁶ In passing, KEEP accuses the FHWA of “secreting away” these traffic modeling reports relying on alternative employment data. Pl. Mot. p. 11, DN 35-2 at 23. The Court found no evidence in the record of this nature.

Furthermore, no rail-to-truck transfer facility is proposed in Bowling Green, including [sic] Transpark.

FEIS, DN 17-2 at 38. This opinion arose from discussions between an expert consultant for the KYTC and the FHWA:

To [sic] extent to which a shift in materials delivery and distribution may occur between modes for a small geographic portion of a metropolitan area is difficult to predict. The rate of truck growth will still exceed that of auto growth for many decades. The railroads are carrying more container cargo and constructing more rail-to-truck transfer facilities. While the rail-truck facilities have the potential to reduce long-distance truck trips on interstate facilities, trucks will still be used to collect and distribute freight to the final origin/destination at the local level. At the local level, the use of rail varies widely with the type of industry. While heavy manufacturing activities may use rail for some freight purposes, most industrial activities do not. A mixture of industrial uses is forecasted for the Study Area, and a rail-to-truck transfer facility (that could generate even more truck traffic) has not been included in the traffic forecasts for the Study Area.

AR at 021733. The FHWA asserts this analysis, coupled with the lack of a major rail-to-truck transfer facility, demonstrates the FHWA cogently explained why the possibility of freight transport by railroad would not affect traffic flows. *Cf. Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 48 (1983) (requiring an agency to cogently explain “why it has exercised its discretion in a given manner”)

KEEP declares the CSX rail line within the Project is capable of carrying freight. It says the FHWA failed in its duties under NEPA when it did not collect data on the firms in the Transpark that were capable of transporting freight cargo via railroad instead of truck. KEEP references Bowling Green Metalforming, a company in the Transpark, which has a rail loading and switching yard on its property. It stresses this facility, along with the CSX rail spur, necessitated a more thorough analysis on the impact of rail.

The FHWA properly incorporated the CSX spur as a factor in its analysis. The FEIS took note of the obvious: no rail-to-truck transfer facility is planned in the vicinity of the City or

the Project.⁷ It then parroted the conclusions of the KYTC's consultant that to the extent truck traffic would be offset by the limited rail-to-truck switching station on the premises of Bowling Green Metalforming, the presence of any such facility in or around the Transpark would not alter the traffic forecasts for the Project area. According to the FHWA, most of the traffic congestion surrounding the Project was local in nature and therefore a corresponding rail facility would not impact earlier predictions. The record includes a report by a KYTC's consultant, opining that a switching station would not alter the truck traffic in the Project area since trucks would still need to "collect and distribute freight to the final origin/destination at the local level." AR at 021733. He also warned the presence of such a facility could actually lead to an increase in the number of trucks on the roads. *Id.* These portions of the record contradict KEEP's assertions that the CSX rail spur went unnoticed.

Although KEEP insists there is an insufficient basis for these conclusions, the agency's decision meets the evidentiary requirement since there is "such relevant evidence as a reasonable mind might accept as adequate to support the conclusion reached." *R.P. Carbone Constr. Co. v. Occupational Safety & Health Review Comm'n*, 166 F.3d 815, 818 (6th Cir. 1998). The KYTC consultant's opinion gave an adequate explanation about why rail was a non-factor within the Corridor. The FHWA's reliance on this "reasoned, evidence-based explanation" does not violate NEPA. *See R.R. Ventures, Inc. v. Surface Transp. Bd.*, 299 F.3d 523, 548 (6th Cir. 2002) (agency decision is not arbitrary or capricious under NEPA where it is "possible to offer a reasoned, evidence-based explanation for a particular outcome").

⁷ KEEP argues in the briefing that the Transpark's master plan includes a rail-to-truck transfer facility. Pl. Rep. Br. p. 13, DN 43 at 21. The pages cited do not support such a conclusion. *See* AR at 010552-55. Indeed, besides the facility at Bowling Green Metalforming, there does not appear to be any rail-to-truck transfer facility in the area.

3. Predetermination of alternative

KEEP proposes the FHWA's analysis was impermissibly biased and predetermined in favor of Alt. 6-Orange. It says the environmental impact statement was but a mere "foreordained formality" and that the FHWA, along with the KYTC and ITA, has been planning to build a large-scale connector in the Corridor since the Transpark's conception. To secure the construction of a project large enough to meet the needs of the Transpark, KEEP alleges Alt. 3, Alt. 4, and Alt. 3+4 were all conceptually flawed so as to ensure the selection of Alt. 6.

An agency must not define the parameters of a project so narrow as to limit its action to one conceivable alternative and obviate the choice in the FEIS to a "foreordained formality." *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991). However, arguments that a federal agency has predetermined the outcome of an environmental impact statement "must meet a high standard." *Forest Guardians v. U.S. Fish & Wildlife Serv.*, 611 F.3d 692, 714 (10th Cir. 2010). "[P]redetermination occurs only when an agency *irreversibly and irretrievably* commits itself to a plan of action that is dependent upon the NEPA environmental analysis producing a certain outcome, before the agency has completed that environmental analysis. . . ." *Id.* (emphasis in original). Agencies are typically given substantial deference and their "actions are judged in accordance with their stated reasons." *Spiller*, 352 F.3d at 242; *see Burkholder v. Wykle*, 268 F. Supp. 2d 835, 849 (N.D. Ohio 2002) (finding that an agency's stated reasons for particular alternative were not a "foreordained formality"). Finally, "an agency may prefer one alternative from the outset, but must 'proceed to perform its environmental tasks with . . . good faith objectivity.'" *Sierra Club v. Fed. Highway Admin.*, No. 10-20502, 2011 WL 3281328, at *4 (5th Cir. 2011) (quoting *Env'tl. Def. Fund, Inc. v. Corps of Eng'rs of the U.S. Army*, 492 F.2d 1123, 1129 (5th Cir. 1974)).

As a general matter, the FHWA did not unreasonably narrow the definition of the Project or consider an insufficient number of alternatives. It reviewed six different alternatives and a no-build alternative before more thoroughly vetting three construction designs. These alternatives were compared to the stated purpose and need for the Project. FEIS, DN 17-2 at 17, 20-22, 37, 47-72. Only after a comprehensive discussion of the other alternatives did the FHWA settle on Alt. 6-Orange. This matter in no way resembles other cases where courts found there was either an insufficient number of alternatives or the federal agency had predetermined a preferred course. *See e.g., Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1071-72 (9th Cir. 2010) (where an agency only considered two primary courses of action, it had unreasonably narrowed the purpose and need statement in the FEIS); *Davis v. Mineta*, 302 F.3d 1104, 1120-22 (10th Cir. 2002) (FEIS did not contain an adequate discussion of alternatives where a federal agency only reviewed the no build alternative and the preferred alternative); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 812-14 (9th Cir. 1999) (federal agency violated NEPA when it only considered two identical alternatives and the no build alternative). The FEIS is not inadequate on this basis.

KEEP's brief pinpoints the FHWA's treatment of Atl. 3 and Alt. 3+4.⁸ With the former, the initial design called for a more modest increase in the number of lanes for KY 446 and U.S. 31, with a total cost of around \$30 million. KEEP says this cost-efficient alternative was abandoned for the final, overbuilt Alt. 3, with total estimated costs of \$53.4 million. KEEP

⁸ KEEP has focused on these two particular alternatives. Nevertheless, to the degree KEEP raises objections to Alt. 4, the Court reaches a similar conclusion. The FEIS describes that Alt. 4 would be less efficient than Alt. 1, failed to address the congestion problems, and lacked any appreciable improvements to the safety of existing roadways; therefore, its rejection was not arbitrary and capricious.

contends these changes were pursued to increase the costs of Alt. 3, thereby reducing its cost effectiveness and eliminating it from consideration. It pursues similar allegations for Alt. 3+4, saying the original planning for this alternative cost between \$183 and \$186 million and was the subject of criticism by FHWA officials. KEEP insists Alt. 3+4 was proposed simply because the rejection of the other alternatives left the FHWA with the binary choice of building or not building, a situation that has drawn the ire of some courts. *Cf. Davis v. Mineta*, 302 F.3d 1104, 1121-22 (10th Cir. 2002). It concludes the obvious flaws in these construction options ensured their failure and, in turn, the construction of Alt. 6.

KEEP has not met its burden in showing the FHWA designed Alt. 3 to fail. The FEIS indicates Alt. 3 was rejected not because of its expense, but because it did not meet the purpose and need of the Project. As no new connections would be made between U.S. 31 and I-65, Alt. 3 was limited in increasing the “effectiveness and efficiency” of the Corridor’s road network. FEIS, DN 17-2 at 54. This resulted in lower efficiency metrics in the vehicle-hours of travel as compared to the no build alternative. *Id.* The FHWA also decided not to pursue Alt. 3 because it “fail[ed] to adequately address future congestion problems”, “would not reduce the mix of large trucks from the local traffic”, and would increase traffic on U.S. 31 as compared to the no build alternative. *Id.* at 55. These problems led the FHWA to exclude Alt. 3 from consideration, since it “would not provide an improved access, significantly reduce congestion, or improve safety.” *Id.* As the FEIS cogently explains why it chose to discard Alt. 3, the FHWA’s decision is entitled to deference. *See Motor Vehicle Mfrs.*, 463 U.S. at 48 (requiring an agency to cogently explain “why it has exercised its discretion in a given manner”).

KEEP’s objections to Alt. 3+4 enjoy a sounder footing. In its motion, KEEP quotes an email sent amongst officials from the FHWA stating the original design for Alt. 3+4 was “poorly

done.” AR at 003391. The email continued, indicating staff from the FHWA thought Alt. 3+4 was designed “in such a way that it could never be built and that [the KYTC] did it that way on purpose so that [the FHWA] would have to pick [Alt. 5 or Alt. 6].” *Id.* KEEP relies on this correspondence, the immaterial changes made to the design of Alt. 3+4 following this email, and the alternative’s bloated construction budget as evidence the FHWA shunned its obligations under NEPA. When the FHWA attempts to explain in its motion that the KYTC proposed the six-lane Alt. 3 minimization in response to these criticisms, KEEP points out this minimization was planned almost a year before the email. *See* AR at 006360.

Still, KEEP has failed to meet its burden and show the reasons for considering Alt. 3+4 were disingenuous. Whereas Alt. 3 and Alt. 4 would not individually improve safety or minimize congestion in the Corridor, the combination of the two “would address the high crash corridor of [U.S. 31] by reconstructing the existing conditions and improving the access control.” FEIS, DN 17-2 at 58. The record indicates Alt. 3+4 would fulfill the purposes and need of the Project by solving the ever increasing traffic demands of the Corridor. *Id.* The conclusion that an amalgamation of Alt. 3 and Alt. 4 would better serve the purpose and need of the Project is supported by the FHWA’s evaluation of the record. *Id.* at 62, 64. In addition, this alternative was ultimately rejected by the FEIS for its non-economic shortcomings. Alt. 3+4 was less efficient than Alt. 6 in reducing overall travel time, would increase heavy truck traffic on U.S. 31 along a high crash area, would likely affect the endangered gray bat population living in Wolf Sink Cave, require the most residential and commercial relocations, and impact a large swath of prime farmland. *Id.* at 67-68. Ergo, its costs played merely a supporting role in its rejection.

KEEP’s concerns about the predetermination for Alt. 6 are misplaced. The FHWA did not irreversibly and irretrievably commits itself to this alternative; instead, it whittled six

potential construction designs down to one by comparing them to the Project's purpose and need. NEPA requires no more. *See Ohio Valley Trail Riders v. Worthington*, 111 F. Supp. 2d 878, 886 (E.D. Ky. 2000) ("The level of specificity with which an Environmental Impact Statement must examine alternatives is a matter of agency discretion, and should be overturned only if the range of alternatives is 'so inadequate as to be an abuse of the agency's discretion.'" (quoting *Kentucky ex rel. Beshear v. Alexander*, 655 F.2d 714, 718 (6th Cir. 1981))).

4. Partial build alternative

"A 'viable but unexamined alternative renders the environmental impact statement inadequate.'" *Muckleshoot*, 177 F.3d at 814 (quoting *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985)). Yet, "[c]ommon sense . . . teaches us that the 'detailed statement of alternatives' cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man." *Vt. Yankee*, 435 U.S. at 551. Because a discussion of alternatives under NEPA is bounded by reasonableness, an agency need not evaluate alternatives that are not "significantly distinguishable" from those already considered. *See Navajo Nation v. U.S. Forest Serv.*, 408 F. Supp. 2d 866, 874 (D. Ariz. 2006), rev'd in part and remanded on other grounds, 479 F.3d 1024 (9th Cir. 2007), opinion adopted en banc, 535 F.3d 1058 (9th Cir. 2008). "Reasonableness is measured by whether [the alternative] achieves the goals the agencies set out to achieve." *Clairton Sportsmen's Club v. Pa. Turnpike Com'n*, 882 F. Supp. 455, 477 (W.D. Pa. 1995) (citing *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991)).

KEEP charges the FHWA violated NEPA when it rejected a partial-build alternative ("PBA") for the connector that would have completed only the southern segment of Alt. 6-

Orange between the new I-65 interchange and US 68/KY 80.⁹ Pl. Am. Compl. ¶ 74, DN 11 at 30. KEEP says early computer modeling showed most of the projected traffic growth would be concentrated south of the Project's intersection with US 68/KY 80, and thus the PBA represented a less expensive alternative to achieve the Project's goals. AR at 021532, 021761. It further accuses the area's political and business leaders of thwarting a thorough evaluation of the PBA to hasten the end of the administrative process. *See* AR at 012544, 012969, 012582. The choice not to review the PBA on its own merits, along with the alleged political strong arming, leads KEEP to believe the creation of the FEIS was flawed.

The FHWA contemplated building only the southern part of Alt. 6, from the I-65 interchange to US 68/KY 80. The FEIS contained the following language:

As the project moves into more detailed design, the possibility of phasing construction of the project will be considered. Potentially, the first phase would construct the section of roadway from a new I-65 interchange north to US 68/KY 80. . . . The second phase would continue the roadway north to US 31W. . . . That section could be constructed at a later date, as traffic volumes dictate. The determination regarding phasing of construction and intersection/interchange configuration at US 68/KY 80 will be made during the final design stage of this project.

⁹ KEEP waffles with its argument for the PBA. Its motion for summary judgment says the FHWA was required to consider only building Atl. 6-Orange between the I-65 interchange and US 68/KY 80. *See* Pl. Mot. p. 17, DN 35-2 at 29. KEEP's reply differs in arguing for the possibility of building a connector between US 68/KY80 between Scotty's Industrial park and BGM. *See* Pl. Reply p. 16, DN 43 at 24; *see also* DN 48-1 at 1 (map indicating differences in the PBAs proposed by KEEP in the briefing).

The Court only considers the PBA described in KEEP's first motion. The latter seems to have been confronted and rejected by the FHWA as infeasible during the administrative process. *See* AR at 006469 ("[T]here is not sufficient spacing between the two entrances on US 68/KY80 (i.e., the western entrance to Magna and the Scotty's Way entrance) to construct an alignment that would lie between the two."); *see also* DN 48-1 at 1. In addition, KEEP's assertion that these two PBAs are one and the same is incorrect. The record demonstrates the public advocated for the first phase of Alt. 6 only, and not the PBA described in KEEP's reply. *See* Pl. Mot. p. 18, DN 35-2 at 30 (citing AR at 018947-18948).

FEIS, DN 17-2 at 67. Construction of Alt. 6 was viewed as a two-step process - building the southern segment (equivalent to the PBA) followed by the section to the north of US 68/KY 80. *See id.* at 18; AR at 004544. Since the PBA was in fact the southern half of Alt. 6, it was necessarily within the spectrum of alternatives the FEIS analyzed.

The PBA was not significantly different from the first phase of construction associated with Alt. 6; it was in fact the exact same course of action, albeit a scaled-down version. A full analysis was unwarranted since the PBA was not distinguishable from the southern half of Alt. 6 and there is no evidence to suggest its environmental impacts would be significantly different. *See Westlands Water Dist. v. U.S. Dept. of Interior*, 376 F.3d 853, 871-72 (9th Cir. 2004) (agency is not required to undertake a separate analysis for the “mid-range” alternatives where they were “not significantly distinguishable” from others or will have “substantially similar consequences” (citations omitted)). The FHWA necessarily considered the impacts of this truncated version of Alt. 6 when it settled on its preferred alternative. Lastly, the FHWA withheld the discretion not to complete Alt. 6 in its entirety. It remarks in the FEIS that the second phase of Alt. 6 will proceed if “traffic volumes dictate.” FEIS, DN 17-2 at 18, 67. That the FHWA is actively contemplating the option for which KEEP is advocating - the partial construction of Alt. 6 - reaffirms a finding that the PBA is within the spectrum of alternatives the FEIS analyzed.

“The touchstone for [a court’s] inquiry is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” *California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982). The FEIS achieved that goal regarding its discussion of the various alternatives, including the PBA that KEEP suggests.

5. Cost benefit analysis

NEPA does not require federal agencies to conduct a monetary cost-benefit analysis (“CBA”), and actively discourages the practice “when there are important qualitative considerations.” 40 C.F.R. § 1502.23. When one is performed, the agency must “discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values, and amenities.” *Id.* Misleading or incorrect economic assumptions in a CBA can defeat the overall goals of a FEIS and thereby taint the balancing of alternatives required under NEPA. *See Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446 (4th Cir. 1996).

KEEP takes issue with the CBA performed in Table 2-3 of the FEIS. FEIS, DN 17-2 at 63. The table measures the impact of each alternative in reducing the hours of travel (“VHT”) for vehicles in the Corridor. KEEP says there is no underlying explanation or basis for the analysis in the FEIS or the administrative record, and the evidence presented in the table was not independently reviewed and verified by the FHWA. It claims the FHWA eliminated references in Table 2-3 to the metric vehicles miles traveled (“VMT”) because it supported the construction of Alt. 3 and Alt. 3+4. The FHWA responds that the table did not seek to examine VMT but VHT, which is a better measure of the Project’s goals.

Improving the level of service in the Corridor was an express need of the Project. *Id.* at 29. The FHWA described in detail why the VHT measurement highlighted the shortcomings for the Corridor’s road network and how the metric was used in the administrative process. *Id.* at 36. The KYTC found the VMT inapplicable to the Project’s goals, as it is an indicator of vehicle operating costs and not the efficiency of travel time. AR at 021753. KEEP’s statements in favor of using VMT instead of VHT are therefore ineffective. Additionally, Alt. 3’s rejection was untethered from Table 2-3, following instead because “it would not provide an improved access, significantly reduce congestion, or improve safety.” FEIS, DN 17-2 at 55. Since Alt. 3 was

dismissed for reasons other than Table 2-3's CBA, any error that could be attributed to it may not form the basis of a judicial reversal. *See Sierra Club v. Slater*, 120 F.3d 623, 637 (6th Cir. 1997) (where a mistake by the federal agency would have no bearing on the ultimate decision, it "shall not be the basis for reversing an agency's decision").

With regards to KEEP's attacks on the methodology and calculation of Table 2-3, the Court finds no cause for alarm. Table 2-3 is clear on its face and the origin of the information it relays has not been hidden. The questions raised in KEEP's reply are answered in the FEIS and administrative record. Whatever flaws may be contained within the calculation do not give rise to a violation of NEPA so severe that the FEIS should be vacated. *Cf.* 40 C.F.R. § 1500.3 (trivial violations of NEPA do not give rise to an independent cause of action). The Court has not located, nor has KEEP alleged, the serious violations needed to revisit the FEIS's issuance. *See Glickman*, 81 F.3d at 446 (where the CBA miscalculated an economic benefit from the federal action by 32%, the court reviewed whether the CBA had poisoned the administrative process). The CBA satisfies NEPA's standard.

C. Objectively and Completely Evaluating the Project's Impacts

NEPA requires federal agencies to evaluate the direct, indirect, and cumulative impacts of their actions. 40 C.F.R. §§ 1502.2, 1502.16(a)-(b). Direct and indirect impacts are both caused by the federal action, *id.* § 1508.8(b), while a cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." *Id.* § 1508.7. Despite these demands, the FEIS need not dream up every possible impact of the agency action to satisfy NEPA; instead, non-significant issues merit only a brief discussion in the FEIS demonstrating why further study is unwarranted. *Id.* § 1502.2(b). Ultimately, it is not the court's role to "substitute [its] judgment

of the environmental impact for the judgment of the agency, once the agency has adequately studied the issue.” *Crounse Corp. v. Interstate Commerce Comm’n*, 781 F.2d 1176, 1193 (6th Cir. 1986). If the agency has taken a “hard look” at the environmental consequences of its action, then the court should end its inquiry and uphold the FEIS. *See id.* (citing *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n. 21 (1976)).

1. Graham Springs Basin

KEEP argues the FHWA “failed to conduct a systematic, interdisciplinary analysis of the Graham Springs Basin [“GSB”] commensurate with the significance of the resources and the potential impacts.” Pl. Mot. p. 22, DN 35-2 at 34. In its motion, KEEP urges reversal of the FEIS for the following reasons: (1) the FHWA failed to conduct a karst study of the Project area, (2) the FHWA did not conduct a floodplain analysis that considered the Project’s impact on sinkholes, (3) the FEIS’s analysis on the impact to rare species is flawed, and (4) the FHWA failed to evaluate the impact of water flowing between the GSB and the TSB. Each of these alleged deficiencies is confronted below.

i. Karst Study

KEEP complains that when considering the importance of the GSB and the geology of north Warren County, the FEIS should have included a study of the surface and subterranean karst features contained within the Project area. It says the geologic survey the FHWA relied on was cursory and did not discuss the karst topography as a whole, instead focusing only on the largest caves and sinkholes. AR at 007459-7460. KEEP criticizes the method by which the FEIS tabulated the biological impact on the caves: measuring the distance from the Project area to the mouth of the cave. Since subterranean water can move 1300 feet per hour, it argues proximity to the cave opening is immaterial when the network of underground streams and

passageways are much closer to the Project.

As an initial matter, the parties dispute the depth of the karst analysis required to satisfy the provisions of NEPA. KEEP cites to *Hoosier Env'tl. Council v. U.S. Dept. of Transp.*, No. 1:06-cv-1442-DFH-TAB, 2007 WL 4302642, at *1 (S.D. Ind. Dec. 10, 2007), for the proposition that the FHWA oversees elaborate karst characterization studies during highway construction projects. It touts the procedures taken to examine the karst topography in *Hoosier Env'tl.* - examination of karst features, assigning significance to each feature, computer modeling of underground water, and conducting 39 dye injections - and challenges the lack of similar action for the current FEIS.

Such complaints ignore the obvious differences between the federal action here and in *Hoosier Env'tl.* Where the Project as slated will create a connector road of roughly 3.8 miles, *Hoosier Env'tl.* reviewed the viability of a highway “ranging between 141 and 156 miles.” *Id.* at *7. The scale of construction and the size of the environmental impacts should guide the topics discussed in the FEIS. *See* 40 CFR § 1502.2(b) (“Impacts shall be discussed in proportion to their significance.”). Considering the canyon between these two federal actions, common sense dictates there would be differences in the analysis employed; that the FHWA chose not adopt certain procedures undertaken in different matters does not make the current FEIS arbitrary and capricious. *Cf. Utah Shared*, 288 F.3d at 1212-13 (even if federal agency does not “employ a particular method of analysis in its study, such as the approach for determining impacts . . . does not render its Environmental Assessment inadequate” (citation omitted)).

Taking the administrative record and FEIS in the aggregate, it is clear the FHWA took the required “hard look” at the karst terrain within the Project area and that this review was proportionate to the size of the agency’s action. These are but some of the citations to the karst

features in the record:

- Geologic and biologic studies were performed by contractors for the FHWA and KYTC. One performed by American Engineers, Inc. focused on the caves and sinkholes, and described mapping 52 locations of interest in the Project area. AR at 007459-7460.
- Lewis & Associates, LLC performed a study that, while primarily investigating the cave shrimp population in the GSB, contained information on the karst formations of the region. *Id.* at 002503-2532. The study noted the frequency with which the hydrology of central Kentucky karst had been studied and listed the caves and springs in the Project area, totaling thirteen different geologic features. The descriptions of these caves and freshwater springs were relied on in the FEIS to highlight the karst features reviewed during the investigatory period. FEIS, DN 17-2 at 72.
- Dr. Crawford's study on the GSB and TSB extensively researched both the hydrogeology and the karst features within the Project area. AR at 001630-1765. In his study, Dr. Crawford searched for caves in the vicinity of Graham Springs, performed dye testing along the divide between GSB and TSB, and investigated the sinkholes located at a proposed site for an airport in the Transpark. *Id.* at 001654-1659.
- Portions of the FEIS and administrative record thoroughly documented significant karst features situated in the Project area, including Long Hollow Cave, Wolf Sink, Mill Cave, and Grant-Palmore Cave. FEIS, DN 17-2 at 93; AR at 0026686, 002678-2679. The FEIS noted the caves in the region were likely interconnected via lateral streams and conduits. FEIS, DN 17-2 at 72.
- The FEIS contained descriptions and analysis of the region's topography, geology, soil, and wetlands. *Id.* at 92-32, DN 17-3 at 1-4. Inasmuch as KEEP questions whether enough was done to test the flow of water underneath the Project area, the FEIS has numerous pages on hydrogeology. *Id.* at 2-3, 42-50.
- The FEIS touched on the watershed, the various threats to this porous type of topography, the impact of the Project to the sinkholes, and the FHWA's attempts to mitigate the direct, indirect and cumulative impacts from the Project. *Id.* at 42-46.

Although the FHWA could have done more to explore this environmental impact, it was not required to so. "In assessing the adequacy [of an agency's impact statement under NEPA], practicability and reasonableness . . . are to be taken into account along with the broad purposes

of [NEPA] to preserve the values and amenities of the natural environment.” *Envtl. Defense Fund v. Tenn. Valley Auth.*, 492 F.2d 466, 468 (6th Cir. 1974). The FHWA took a “hard look” at the karst terrain within the Project area and GSB, and that review was appropriate for the size of the federal action.¹⁰

KEEP challenges the mitigation measures to stop seepage of pollutants and toxins into the GSB’s subterranean water system. The FEIS described the introduction of detention basins, silt traps, silt fencing, temporary seeding and mulch to stop runoff during construction. FEIS, DN 17-3 at 45. Post construction, the KYTC and FHWA will build grass swales, interceptor ditches, and detention basins to slow and manage the introduction of runoff and spills into the natural drainage system. *Id.* KEEP claims these measures are insufficient because they have not been adequately described in the FEIS and their practical implications are untested.

“A proposed mitigation plan does not need to be laid out to the finest detail in [the FEIS] to be NEPA-compliant.” *Ky. Riverkeeper*, 2011 WL 2789086, at *23 (citing *Robertson*, 490 U.S. at 352). Moreover, “it would be inconsistent with NEPA’s reliance on procedural mechanisms - as opposed to substantive, result-based standards - to demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act.”

¹⁰ Repeatedly in the briefing, KEEP says NEPA mandated that the FHWA compile a comprehensive list of the karst features in the Project area and evaluate them all. The only case KEEP cites in support for this proposition is *Hoosier Env'tl.*, which for the reasons explained above, is remarkably different from this matter. Sierra Club cites to another “analogous” case where the KYTC created a list of karst features for a 22 mile stretch of highway between London and Somerset, Kentucky. Memo. of Law, p. 2, DN 41 at 4. The Court remains unconvinced. The FHWA and KYTC are tasked with building a 3.8 mile connector road - not a 22-mile stretch of highway. The agencies cannot be faulted for a different analysis when confronted with a different project. Even if the karst feature list was required, not producing such a document does not undermine the FEIS so much that it should be overturned. *See Save Our Cumberland Mountains*, 453 F.3d at 348 (applying harmless-error to NEPA review where error did not cause prejudice to overall process).

Communities, Inc. v. Busey, 956 F.2d 619, 626 (6th Cir. 1992) (quoting *Robertson*, 490 U.S. at 352). In fact, mitigation measures must only be “‘reasonably complete’ and detailed enough to ‘ensure that environmental consequences have been fairly evaluated.’” *League to Save Lake Tahoe v. Tahoe Reg’l Planning Agency*, 739 F. Supp. 2d 1260, 1282 (E.D. Cal. 2010) (quoting *Robertson*, 490 U.S. at 352).

The FEIS meets this threshold. It describes with particularity the efforts at mitigation both during and after construction of the Project. It forecasts how construction crews will capture, detain, and contain the sinkholes they discover during the building phase. Drainage basins will have a minimum volume of 10,000 gallons to protect against spills by tanker trucks using the connector road. The KYTC will return when necessary to service the swales and drainage basins in the Project area when the future need arises. The administrative record includes diagrams of how the KYTC will construct the grassy swales and treat the open sinkholes encountered in the Project Area. KEEP’s claim that there is no evidence these mitigation measures will be successful is belied by the KYTC’s substantial experience in building similar highways in Kentucky overtop of karst topography. Simply put, the FEIS does more than just list the mitigation measures undertaken, and those explored are “detailed enough to ‘ensure that environmental consequences have been fairly evaluated.’” *Robertson*, 490 U.S. at 352. The discussion of the mitigation efforts are adequate to meet NEPA’s burden.

ii. Floodplain Analysis

KEEP argues the FHWA declined to evaluate the floodplains of the sinkholes within the Project area and failed to bring the matter to the public’s attention during the administrative process. Regulations require the FHWA to perform location-hydraulic studies where federal action will be taken on flood plains. See 23 C.F.R. § 650, *et seq.* These studies must include an

analysis of the risks associated with the federal action, its impacts on the floodplain, the measures to minimize floodplain impacts, and the measures to restore the floodplain. *Id.* § 650.111(c)(1)-(5). The regulations further require the studies to “include evaluation and discussion of the practicability of alternatives to any longitudinal encroachments.” *Id.* § 650.111(b). A location-hydraulic study did not appear in the FEIS.

The FHWA puts forward that such a report was unnecessary because the regulations only apply to federal action in “base flood plains.” *Id.* § 650.107. Base floodplains are areas that have a “1-percent chance of being exceeded in any given year,” or put another way, areas within the 100-year floodplain. *Id.* § 650.105(b)-(c). Citing documents in the administrative record that state the Project is not within a 100-year floodplain, the FHWA contends it was not required to abide by 23 C.F.R. Part 650. *See* AR at 006757, 014817.

KEEP disagrees with this explanation for two reasons. It insists the FHWA never determined the base floodplain and sinkhole base flood elevations as required by NEPA, and instead relied on previous floodplain reports performed for the Transpark. Such statements are undermined by the plain language of 23 C.F.R. § 650.107(a): the provisions of the 23 C.F.R. Part 650 apply to “all encroachments and to all actions which affect base flood plains.” KEEP agrees that this is an accurate reading of the statute and that the Project area and the Transpark sit outside the 100-year floodplain. Where the FHWA has relied upon past floodplain analysis and abided by the regulations’ requirements, they have not acted in an arbitrary or capricious manner.¹¹

¹¹ Furthermore, KEEP did not raise this issue during the administrative process; therefore, the argument is untimely. *See Nuclear Energy Inst., Inc. v. Env’tl. Prot. Agency*, 373 F.3d 1251, 1297 (D.C. Cir. 2004) (“It is a hard and fast rule of administrative law, rooted in simple fairness, that issues not raised before an agency are waived and will not be considered by a court on

Next, KEEP cites to Executive Order No. 11988, 42 Fed. Reg. 26951 (May 24, 1977), which seeks to minimize federal actions that may harm floodplains. It requires an agency to analyze the impact of its proposed actions on floodplains and to refrain from acting unless no practical alternative can be found. *See Watershed Assocs. Rescue v. Alexander*, 586 F. Supp. 978, 986-87 (D. Neb. 1982). However, the executive order's mandate is limited to "floodplains", defined as "the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year." *Id.* at Sect. 6(c). KEEP has dug deeper into the legislative history of Executive Order No. 11988 and unearthed the Water Resources Council's ("Council") guidelines to federal agencies for enacting regulations in accordance with the order. Guidelines for Implementing Executive Order 11988, 43 Fed. Reg. 6029 (Feb. 10, 1978). Contained within, the Council defines special floodplain areas to include "sinkholes" because "flood problems are caused when development occurs in areas drained by sinkholes which often become plugged." *Id.* at 6042. KEEP says this language prescribes an evaluation of the Project's impact on sinkhole flooding as "sinkholes were included in the types of floodplains subject to the requirements of [Executive Order 11988]." Mt. for Judicial Notice. p. 2, DN 49 at 2.

The language from the Council cannot alter the unambiguous texts of 23 C.F.R. § 650.107(a) and Executive Order 11988. The former explicitly prefaces the regulations' applicability on federal action within base floodplains; the latter offers agencies discretion for floodplain analysis where the action occurs outside of a base floodplain. Since the regulations

review.").

and the Executive Order that birthed 23 C.F.R. Part 650 are clear on their faces, the Court cannot construe the FHWA's interpretation of either as unlawful. *See Ky. Waterways Alliance v. Johnson*, 540 F.3d 466, 474-75 (6th Cir. 2008) (under the APA, a court must defer to an agency's interpretation of its own regulations unless it is "plainly erroneous or inconsistent with the regulation"). What is more, the Council both predicted discrepancies in the treatment of floodplains between government agencies and admitted its guidelines were simply advisory. The Council uses the following language in the guidelines:

The objective of these guidelines is to provide broad guidance in the interpretation of [Executive Order 11988] to assist each agency which will be developing its own individual procedures for compliance with [Executive Order 11988]. It is recognized that agency procedures will necessarily vary to meet legislatively prescribed missions as well as the requirements of [Executive Order 11988].

Guidelines for Implementing Executive Order 11988, 43 Fed. Reg. 6029, 6030 (Feb. 10, 1978).

The Council's guidelines were meant to do just that - guide - and not be adopted word-for-word as KEEP suggests.

The applicable regulations do not require a floodplain analysis under these circumstances. For that reason, this basis for relief is rejected.

iii. Impact on Rare Species

The FEIS analyzed the Project's impact on three rare species living in the vicinity of the Project: (1) the Indiana bat, (2) the Gray bat, and (3) the Kentucky cave shrimp ("cave shrimp"). FEIS, DN 17-3 at 51-58. The section weighed the direct, indirect, and cumulative effects of the Projects on these animals and ultimately concluded its impacts would be nonexistent or negligible. Prior to the FEIS, researchers surveyed twelve caves within the GSB for cave shrimp with high density scuba lights and baited traps. No cave shrimp were located. This search confirmed an earlier study by Western Kentucky University that failed to identify any cave

shrimp in Mill Cave and Wolf Sink using baited minnow traps and diving lights. The absence of cave shrimp in the GSB lead the FHWA to believe that they would not be directly, indirectly, or cumulatively affected by the Project.

KEEP asserts the analysis of the cave shrimp is inadequate because researchers acting on behalf of the FHWA did not investigate prime shrimp habits in the northern part of the GSB. Such statements are inaccurate. The FEIS relied on two thorough and far-reaching studies that found no evidence of a cave shrimp habitat in the GSB cave system. Researchers for the FHWA-commissioned study by Lewis & Associates, LLC (“Lewis Study”) used scuba gear and lights to search the cave and “strived to look at as many sites possible in the entire basin.” AR at 0002506. According to the Lewis Study, many of the entry points into the underground portions of GSB were inaccessible, unsafe, or unavailable. AR at 006459, 002080. More importantly, the lack of cave shrimp in the examined locations and the estimations of water flow led FHWA’s experts to conclude the Project’s effect on cave shrimp were minimal to nonexistent. The FHWA’s reliance on its expert’s well-informed opinion is entitled to deference. *See Marsh*, 490 U.S. at 378 (court must defer to the agency’s qualified experts).

KEEP states the FEIS ignored other endangered species, including freshwater mussels, troglobites, southern cave fish, cave crayfish, and cave beetles. It claims a failure to scrutinize the impacts on these creatures and refusing to consider alternative routes make the FEIS arbitrary and capricious. These assertions are without merit. The Biological Assessment identified and considered the impact of the Project on the seven species of freshwater mussels living in the area. AR at 002644-2645. It concluded “[b]ecause the habitat [of the mussels] is completely absent within the project area,” the construction would not affect the nearby mussel species. *Id.* at 002645. The Fish and Wildlife Service agreed with these findings. *Id.* at 002869. KEEP

references documents within the record expressing concern about water seepage from the Project Area to the mussels' habitat in the hope of painting the FEIS as unreasonable. Such statements do not overwhelm the thrust of the record that the FHWA relied on experts to study the issue and report their findings. *See Stop The Pipeline v. White*, 233 F. Supp. 2d 957, 964 (S.D. Ohio 2002) (an agency has the discretion to rely on the reasonable opinions of its qualified experts).

KEEP's contentions about other cave-dwelling animals, including troglobites, southern cave fish, cave crayfish, and cave beetles, are unpersuasive. First, this issue was not raised during the period of public comment. Next, the FHWA implicitly considered these species during the administrative process when it studied water runoff and seepage into GSB. FEIS, DN 17-3 at 44 (saying spills within the Project area could spread throughout the groundwater and potentially harm "cave fauna"); AR at 001612. The mitigation measures described in the FEIS will detain stormwater runoff from the proposed highway and spills before they are introduced into the drainage system. The steps taken for mitigation were fairly evaluated in the FEIS; therefore, KEEP's complaints about the Project's impact to these animals are wrong.

iv. Water seepage between GSB and TSB

As discussed above, TSB is situated to the northeast of GSB. Although experts debate the frequency and the amount, no one disputes that water could flow between GSB and TSB. They also agree this reversal of flow would most likely occur during a heavy rain or flood in the region. KEEP claims the FEIS omitted an analysis on the junction between GSB and TSB, and the indirect and cumulative impacts that a reversal of water flow would have on the biodiversity of Mammoth Cave.

The FEIS relied on the following opinion from the Biological Assessment to discount concerns over water flow from GSB to TSB:

The Center for Caves and Karst Studies (CCKS) recently researched various karst related issues including the potential for spillover from the Kentucky Transpark location within the Graham Springs Groundwater basin into the Turnhole Springs Groundwater basin and ultimately MCNP (Crawford, 2003) The CCKS investigation concluded that “groundwater does not flow from the Transpark site into Turnhole Spring and Mammoth Cave National Park.” The study further concluded that “the risk of a rain event or flood event ever happening that could produce flow reversal from the Transpark site over the divide and into Mammoth Cave National Park is negligible.”

FEIS, DN 17-3 at 57 (emphasis added). KEEP criticizes this opinion because it originates from an ITA-commissioned report by Dr. Nicholas Crawford. It says the report is tainted by a conflict of interest since the ITA funded the report.

These accusations are inappropriate and divorced from the proof of the administrative record. Agencies must “insure the professional integrity, including scientific integrity, of the discussions and analyses” included in its EIS. 40 C.F.R. § 1502.24. Yet, KEEP offers no support for its insinuations that Dr. Crawford has traded away his professional integrity for financial gain. Dr. Crawford’s resume indicates he is a professor of geology, an accomplished writer on groundwater contamination of karst aquifers, and has prepared more than 15 reports on the cave and karst system in the County. AR at 001782. He is aptly qualified to create reports upon which the FHWA may rely. Even ignoring his own expertise, Dr. Crawford’s report relied in large part on previous research by other karst specialists. *Id.* at 001649. The research examined seventeen floods between 1979 and 1989 and found “the groundwater gradient remained toward [GSB], and flow reversal did not occur.” *Id.* at 001650. Dr. Crawford notes that in the region’s largest flood in 1913, the direction of subterranean water did not change. It is therefore his opinion that the threat of reversal of flow between GSB and TSB is overstated. KEEP’s naked allegations in the face of Dr. Crawford’s well-reasoned analysis do not justify overturning the FEIS.

Under 40 C.F.R. § 1502.22, an agency must “obtain and include in the EIS information on reasonably foreseeable significant adverse impacts that are essential to a reasoned choice among alternatives if the costs of obtaining such information are not exorbitant.” *Lee v. U.S. Air Force*, 354 F.3d 1229, 1241 (10th Cir. 2004) (quoting *Holy Cross Wilderness Fund v. Madigan*, 960 F.2d 1515, 1523 (10th Cir. 1992) (internal quotations omitted)). If such an impact exists, the FEIS must include a section that describes a statement to that effect, the scientific evidence relevant to evaluating the impact, and the agency’s evaluation of the impact. 40 C.F.R. § 1502.22(b)(2). At its core, this section “weigh[s] the cost of proceeding in the absence of sufficient information as one factor in their decisions.” *Vill. of False Pass v. Watt*, 565 F. Supp. 1123, 1149 (D.C. Alaska 1983) (citing *State of Alaska v. Andrus*, 580 F.2d 465, 473 (D.C. Cir. 1977)).

KEEP charges the FEIS improperly excludes a section interpreting section 1502.22, as it applies to the flow between GSB and TSB. However, section 1502.22 is applicable only where there are “reasonably foreseeable significant adverse impacts.” 40 C.F.R. § 1502.22(b). Dr. Crawford’s report found that the potential for water to move from GSB to TSB was “highly improbable” given that the most prolific floods in the past 100 years had not caused a reversal of water flow into the TSB. Dr. Crawford’s report was convincing and only fortifies the Court’s conclusion that an analysis under section 1502.22 was unnecessary to satisfy NEPA. *See Lee*, 354 F.3d at 1241 (where adverse impact was unlikely to occur, it could not be reasonably foreseeable). In summary, because the adverse impact of a spill contaminating Mammoth Cave is highly speculative, the FHWA was not required to review it. *Robertson*, 490 U.S. at 356 (NEPA does not “overemphasize highly speculative harms”).

To the extent KEEP disagrees with Dr. Crawford’s conclusions about his opinion, the

FHWA is accorded deference in choosing which expert opinions to follow. *Marsh*, 490 U.S. at 378 (court must defer to the agency's qualified experts). Federal agencies may rely on outside experts to evaluate environmental impacts. *Coliseum Square Ass'n, Inc. v. Jackson*, 465 F.3d 215, 236 (5th Cir. 2006) ("The intent of the controlling regulations is that 'acceptable work completed by parties outside the agency not be redone.'" (quoting *Save Our Wetlands, Inc. v. Sands*, 711 F.2d 634, 642 (5th Cir. 1983))). KEEP's objections to Dr. Crawford's report are not proper grounds for summary judgment.

2. Induced-Growth effects of Project

When evaluating the indirect effects of federal action under NEPA, the agency must consider the "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems" 40 C.F.R. § 1508.8(b). These include growth inducing effects that may arise at a later time, but "are still reasonably foreseeable." *Id.* "While 'foreseeing the unforeseeable' is not required, an agency must use its best efforts to find out all that it reasonably can." *Barnes v. U.S. Dept. of Transp.*, No. 10-70718, 2011 WL 3715694, at *11 (9th Cir. 2011) (quoting *City of Davis v. Coleman*, 521 F.2d 661, 676 (9th Cir. 1975)).

KEEP says the FHWA improperly omitted an analysis on the growth inducing effects of the Project in several areas. The FEIS sets forth the Project would indirectly impact the 340 acres to the Transpark's east included in Phase II because the connector's construction would spur industrial growth on that land. Excluded from the indirect-impact analysis were the 591 acres of Phase I that are still undeveloped. *See* AR at 003729 (map of direct and indirect effects). KEEP insists this portion of Phase I, currently farm land, should have been reviewed for the growth-inducing effects of the Project and its omission was an abuse of discretion.

The FHWA retorts that the indirect effect analysis is only triggered where the federal action *causes* the growth inducing effects. 40 C.F.R. § 1508.8(b). During the administrative process, the FHWA opined that the unused 591 acres of Phase I would be developed regardless of whether the Project was built. As evidence for this conclusion, it cited to ITA's current ownership of the land, that it had already been rezoned for industrial use, and the presence of industry in the Transpark. Since Phase I would occur with or without the Project, the FHWA did not view it as an indirect effect and chose not to analyze it as such. *See* AR at 004852.

The Court agrees with the FHWA's explanation. In advance of the Project's approval, the land included in Phase I was owned and under ITA's management and had already been rezoned for industrial use. It had generated interest and construction projects from several businesses, employing roughly 800 people. The FEIS conceded the Transpark would benefit from improvements to the transportation network, but ultimately found the local government intended to develop Phase I absent federal action. In light of the administrative record, the Court cannot say Phase I of the Transpark and the Project were interdependent. Ergo, FHWA's decision was reasonable. *See Airport Neighbors Alliance, Inc. v. United States*, 90 F.3d 426, 431 (10th Cir. 1996) (where components of a runway upgrade were not interdependent on the federal action, NEPA did not require a cumulative impact analysis of those components).

KEEP continues in this vein, stating the FEIS failed to predict and consider the indirect impacts of Phase II on the area's air quality. The FHWA argues it could not accurately predict the types of industries that would have occupied Phase II, and therefore no reasonable person could have predicted the impact these new industries would have had on air quality. FEIS, DN 17-3 at 21-22.

Agencies may not "shirk their responsibilities" under NEPA simply because complying

with the statute necessarily involves a degree of forecasting and speculation. *See Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

Nevertheless, “[a] government agency cannot be expected to wait until a perfect solution of environmental consequences of proposed action is devised before preparing and circulating an EIS.” *Natural Res. Def. Council, Inc. v. Callaway*, 524 F.2d 79, 88 (2d Cir. 1975). In *Minnesota Pub. Interest Research Grp. v. Adams*, 482 F. Supp. 170 (D.C. Minn. 1979), the plaintiffs challenged an agency’s decision to construct an interstate because the FEIS did not review the secondary impacts of the highway, in particular “the expected increase in future development as a result of the highway construction and the impact of additional noise on future residential development.” *Id.* at 177. The court concluded such an analysis was unnecessary as it contradicted “the well settled principle that the touchstone in interpreting the adequacy of environmental impact statements is one of reasonableness.” *Id.* (citations omitted).

The Court is persuaded by this precedent. The FHWA performed a satisfactory review of air quality concerns. FEIS, DN 17-3 at 14-25. The FEIS indicates officials performed the necessary testing under the Clear Air Act, including but not limited to carbon monoxide hot spot analysis and carbon monoxide micro scale analysis. To the extent the FHWA did not evaluate the potential emissions of the industry in Phase II of the Transpark, it was unclear how the land will be zoned if and when it is purchased, what type of industry will be attracted to the space when it is made available, and the types of emissions those industries will produce when they are in place. As NEPA does not require a “crystal ball inquiry,” the FEIS is not flawed absent this information. *Callaway*, 524 F.2d at 88.

KEEP advances that “the negative redistributive effect/development shift associated with the Transpark accessibility provided by the Project should have been analyzed as an adverse

indirect economic effect” Pl. Reply p. 35, DN 43 at 35. Plainly spoken, KEEP says the FEIS should have analyzed how the Project would have negatively affected the surrounding region by attracting jobs out of the rural counties and into the Transpark. KEEP did not raise this issue during the administrative process and thus its right to assert this issue now is tenuous. Overlooking this procedural misstep, it is difficult to conceive how the FHWA could have predicted, with any hope of accuracy, the economic effects of a developmental shift of local industry toward the Transpark. This conclusion follows particularly since the Project could have only indirectly affected the shift in jobs to the Transpark insofar as they were located on the Phase II. As the land affiliated with Phase II was undeveloped and not zoned, an attempt to forecast the types of local industry to occupy it would be sheer conjecture. NEPA does not require an analysis on such speculative harms. *Utahns for Better Transp. v. U.S. Dept. of Transp.*, 305 F.3d 1152, 1176 (10th Cir. 2002) (a detailed analysis is only required by NEPA where impacts are reasonably foreseeable).

At its motion’s terminus, KEEP pushes for the FEIS’s overturn because it did not adequately discuss the indirect effects of the Project with respect to karst geologic features, wooded areas, and the cumulative loss to farmland.¹² First, the FEIS was capable of adequately addressing the environmental impacts of the Project without a detailed inventory of the karst geologic features. Second, KEEP did not raise its concerns over wooded areas during the administrative process and therefore they are not properly before this Court. Third, even if these

¹² KEEP argues the FEIS should have discussed the indirect and cumulative effects of the Project on wetlands, cultural resources, and socioeconomic resources. The Court finds however the FEIS adequately confronts these subjects. FEIS, DN 17-3 at 44, 55-57, 39-42, 61-88. The analysis offered is lengthy and reasoned; thus, these objections are not discussed further. KEEP also says the FHWA did not address the indirect and cumulative impacts of sinkhole floodplains. Since the Court found such an analysis was unnecessary, the Court rejects such a statement.

issues should have been addressed by the FEIS, they are not reason enough to begin the process anew. *See Citizens For Alternatives To Radioactive Dumping v. U.S. Dept. of Energy*, 485 F.3d 1091, 1098 (10th Cir. 2007) (where plaintiff's claimed deficiencies about the EIS are "merely flyspecks," the court should not overturn the agency action). The Court finds the FHWA took a hard look at the environmental impacts of the Project; these objections are not "significant enough to defeat the goals of informed decisionmaking and informed public comment." *Id.* (quoting *Lee*, 354 F.3d 1237).

IV. CONCLUSION

The policy and law surrounding NEPA both facilitate and encourage citizens to challenge a federal agency's proposed actions where they will have a pronounced effect on the environment. Court reviews are often a necessary component of the NEPA process, but only to the extent that an agency's decision contravenes the law. *Northeast Ohio*, 411 F.3d at 731. The environmental impacts proposed by the Project are not minor issues and the Court has reviewed them with an eye toward their gravity.

With the numerosity, sophistication, and technicality of KEEP's objections, it is easy to lose sight of forest for the trees. The Court has attempted to conduct a thorough and meticulous review of each objection and apply the appropriate standard of review. Still, taking a broad view of the FEIS, the Court concludes the FHWA adequately addressed the environmental impacts of the Project and complied with NEPA's procedural requirements. KEEP's complaints do not reveal an administrative process dogged by substantive and procedural errors. On the contrary, the FHWA and KYTC gave the Project's impacts due consideration and found them to be outweighed or secondary to its benefits.

Finally, the Court applauds the detailed review of the technical data and the legal analysis

provided by all those who have filed a brief in this matter.

For the foregoing reasons, IT IS HEREBY ORDERED Plaintiff's motion for summary judgment (DN 35) is DENIED. Defendants' motion for summary judgment (DN 40) is GRANTED. Judgment shall be entered for Defendants.